MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 3, 2015/2016

BAC3684-SECURITIES INVESTMENT AND PORTFOLIO MANAGEMENT

(All sections / Groups)

30 MAY 2016
9.00 a.m.-12.00 p.m.
(3 Hours)

INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 3 pages with 4 Questions only.

2. Answer all questions. All questions carry equal marks and the distribution of the marks for each question is given.

3. Please print all your answers in the Answer Booklet provided.

STRUCTURED QUESTIONS (25 Marks each)

There are FOUR questions in this section. Candidates MUST answer ALL FOUR questions.

Question 1 (25 Marks)

(a) In a Top-Down approach security analysis, the first step is to evaluate the country's economy. As an analyst, you are given the following information about the country's economy. Explain each of the following key economic variables and its effect on the local stock market. Based on these variables, what can you conclude about the trend of the local stock market?

	2013	2014	2015
1) **Gross Domestic Product Growth rate (%)**	5.3	4.8	4.6
2) **Index of Industrial Production (1993=100)**	200.5	198.6	197.2
3) **Consumer Price Index (% change)**	1.1	1.2	1.4
4) **Unemployment rate (%)**	3.6	3.7	3.8
5) **Interest rates (%)**	2.85	3.00	3.10

(15 marks)

(b) Duration is an important factor to measure the sensitivity of bond price towards the changes in interest rate. As a bond trader, you want to analyse Apollo Berhad 10 percent coupon bond that will mature in 5 years and is currently selling at par. Calculate the bond's duration using annual compounding. What happen to the bond price if interest rate increased from 10 percent to 12 percent?

(10 marks)

Question 2 (25 Marks)

(a) The directors of Sapura expect to pay a dividend of RM 1.50, a year from today. It is estimated that during the next four years (i.e. years 2 through 5), the dividend will grow at an annual rate of 16 percent. After that the growth rate will be equal to 12 percent per year and continue at that rate indefinitely. Calculate the present value of PDB's stock if the Treasury bill rate is 9 percent, beta for PDB is 1.1 and the return on market is 14.45 percent. Would you buy the stock if the current market price is RM40?

(15 marks)

Continued....

(b) Security analysis is divided into fundamental and technical analysis. In the investment world, technical analysis is also referred to as studying behavioural finance. Briefly explain the following regarding behavioural finance:

i) Belief perseverance (3 marks)
ii) Overconfidence (3 marks)
iii) Confirmation bias (4 marks)

Question 3 (25 Marks)

a) Stock X has the following range of outcomes and probabilities:

Outcomes X	Probability of Outcomes
6%	0.20
9	0.60
12	0.20

Stock Y has an expected value of 12 percent and a standard deviation of 2.2 percent that is countercyclical to Stock X.

Calculate the expected value of the portfolio and its standard deviation if both assets are combined into a portfolio with equal distribution in Stock X and Y.

A portfolio may achieve diversification benefit if it includes securities that correlate negatively with each other. Portfolio that is diversified using negatively correlated assets can also reduce its standard deviation. Prove this statement correct by using the above information about stock X and Y which has correlation coefficient (r_{ij}) of –0.40.

(20 marks)

b) You are given the returns of Stock A and Stock B as the following:

Day	Stock A (%)	Stock B (%)
1	+10	+10
2	-5	+10
3	+10	-5
4	-5	-5
5	+10	+10
6	-5	-5
7	+10	+10

Which stock has the rate of return that tends to refute a random walk? Why?

(5 marks)

Continued....

Question 4 (25 Marks)

(a) Investing in derivatives give investors the opportunity to invest in the underlying securities at a lower price. Realizing this fact, Matt decided to take part in the options market. He bought a European call option contract on 2 lots of TM shares. The Exercise price is RM 5 and the option premium is RM 1.25 per share.

i) Calculate the net payoff to Matt and the writer of the option, if at the time of expiration, the market price of TM shares is in the range between RM 3 and RM 7. Indicate whether Matt should exercise the option at each price. Ignore short-term interest rates and sales commissions.

(10 marks)

ii) What can you conclude from the results in question (a) regarding the profit and loss for the holder and the writer of the call?

(2 marks)

iii) Calculate the breakeven price for this stock.

(5 marks)

(b) As a Futures Broker Representative, you are required to explain to derivative investors the use of margin in all future contracts as well as its pros and cons. Illustrate to the investors on how the use of margin affects the inherent risk-return nature of the futures market if the value of investment is RM8000 and margin is 40%.

(8 marks)

End of Page